Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (Cancelled)

2 (Currently Amended). A ~~transformed~~ method according to claim 12, wherein the *Lemnaceae* whole plant, plant tissue or callus is ~~according to Claim 1,~~ of the genus *Spirodela*, *Lemna* or *Wolffia*.

3-11 (Cancelled)

12 (Currently Amended). A method for the stable genetic transformation of *Lemnaceae* whole plants, plant tissue or callus, which comprises:

bringing the *Lemnaceae* whole plant, plant tissue or callus into contact with *Agrobacterium* cells containing a transforming DNA molecule; and

incubating the *Lemnaceae* whole plant, plant tissue or callus with the *Agrobacterium* cells, whereby cells in said whole plant, plant tissue or callus become stably transformed with said DNA,

wherein the *Agrobacterium* cells are brought into contact, prior to or during the transformation method, with a booster medium that enhances the *Agrobacterium* cells' virulence, said booster medium comprising a fresh cell

suspension of dicotyledonous plants or comprising *Lemnaceae* plant extracts, and further comprising caffeine at a concentration of 100-500 mg per liter of medium.

13 (Previously Presented). A method according to Claim 12, wherein the *Agrobacterium* cells specifically target the plant's meristematic tissue.

14 (Previously Presented). A method according to Claim 13, wherein the *Agrobacterium* cells are *A. tumefaciens* strains EHA105, EHA101 or GVE3103.

15 (Previously Presented). A method according to Claim 12, wherein the *Agrobacterium* cells target wounded regions in the plant.

16 (Previously Presented). A method according to Claim 15, wherein the *Agrobacterium* is *A. tumefaciens* strains LBA4404 or C58.

17 (Currently Amended). A method according to claim 12, wherein, during the incubation of the *Lemnaceae* plant tissue with the *Agrobacterium* cells, vacuum infiltration is applied.

18 (Currently Amended). A method according to Claim 12, wherein, prior to incubation of the *Lemnaceae* plant tissue with the *Agrobacterium* cells, the plant's meristematic zone is exposed by removal of the daughter fronds.

19 (Previously Presented). A method for the genetic transformation of a *Lemnaceae* plant, comprising:

cutting the plant into particles of a size such that they still contain undamaged meristematic tissue capable of developing into full plants;

incubating said particles with *Agrobacterium* cells containing transforming DNA molecules, whereby said transforming DNA is introduced into meristematic cells in said particles; and

producing transformed plants from the transformed meristematic tissue.

20 (Cancelled)

21 (Previously Presented). A method according to Claim 19, wherein the particles have diameters, the average of which is above 150 µm.

22 (Previously Presented). A method according to Claim 21, wherein the particles have diameters, the average of which is about 150 µm to about 750 µm.

23-27 (Cancelled)

28 (Previously Presented). A method according to claim 12, wherein the transformation process takes place in a media having a pH below about 5.2.

29 (Currently Amended). A method according to Claim ~~27~~12, wherein the booster medium comprises a fresh cell suspension obtained from a dicotyledonous plant.

30 (Previously Presented). A method according to claim 29, wherein the fresh cell suspension is at a concentration of 1-10% (w/v).

31 (Cancelled)

32 (Previously Presented). A method according to claim 29, wherein the fresh cell suspension of a dicotyledonous plant is obtained from the family of *Solanaceae*.

33 (Currently Amended). A method according to claim ~~27~~12, wherein the booster medium is a plant culture medium having a pH of about 3.5 to 4.2, and comprising 1-10% (w/v) of fresh cell suspension of *Nicotiana tabacum* and 100-500 mg per liter of caffeine.

34 (Currently Amended). A method for the stable genetic transformation of *Lemnaceae* whole plants, plant tissue or callus, which comprises:

bringing the *Lemnaceae* whole plant, plant tissue or callus into contact with *Agrobacterium* cells containing a transforming DNA molecule; and

incubating the *Lemnaceae* whole plant, plant tissue or callus with the *Agrobacterium* cells, whereby cells in said

whole plant, plant tissue or callus become stably transformed with said DNA,

wherein the *Agrobacterium* cells are brought into contact, prior to or during the transformation method, with a booster medium that enhances the *Agrobacterium* cells' virulence, said ~~according to Claim 27, wherein the~~ booster medium ~~comprises~~ being a *Lemnaceae* plant extract.

35 (Original). A method according to Claim 34, wherein the *Lemnaceae* plant ~~extracts are~~extract is a *Spirodela punctata* ~~extracts~~extract.

36-71 (Cancelled)

72 (New). A method according to claim 34, wherein the *Lemnaceae* whole plant, plant tissue or callus is of the genus *Spirodela, Lemna* or *Wolffia*.

73 (New). A method according to Claim 34, wherein the *Agrobacterium* cells specifically target the plant's meristematic tissue.

74 (New). A method according to Claim 73, wherein the *Agrobacterium* cells are *A. tumefaciens* strains EHA105, EHA101 or GVE3103.

75 (New). A method according to Claim 34, wherein the *Agrobacterium* cells target wounded regions in the plant.

76 (New). A method according to Claim 75, wherein the *Agrobacterium* is *A. tumefaciens* strains LBA4404 or C58.

77 (New). A method according to claim 34, wherein, during the incubation of the *Lemnaceae* plant tissue with the *Agrobacterium* cells, vacuum infiltration is applied.

78 (Original). A method according to Claim 34, wherein, prior to incubation of the *Lemnaceae* plant tissue with the *Agrobacterium* cells, the plant's meristematic zone is exposed by removal of the daughter fronds.

79 (New). A method according to claim 34, wherein the transformation process takes place in a media having a pH below about 5.2.